3

Docket No. G-175US03PCT
Patent Application

In the Claims

1-14 (canceled)

- 15. (new) A method of treating a metabolic-related disease or disorder comprising the administration of a composition comprising a polypeptide and a physiologically acceptable carrier to an individual having said metabolic disease or disorder, wherein polypeptide is selected from:
 - a) a polypeptide comprising SEQ ID NO: 2;
 - b) a polypeptide comprising amino acids 17 to 258 of SEQ ID NO: 2;
 - c) a polypeptide comprising SEQ ID NO: 4;
 - d) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 4;
 - e) a polypeptide comprising SEQ ID NO: 6;
 - f) a polypeptide comprising amino acids 16 to 238 of SEQ ID NO: 6;
 - g) a polypeptide comprising SEQ ID NO: 8;
 - h) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 8;
 - i) a polypeptide fragment comprising:
 - at least 6 consecutive amino acids and not more than 258 consecutive amino acids of SEQ ID NO: 2;
 - 2) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 4;
 - at least 6 consecutive amino acids and not more than 238 consecutive amino acids of SEQ ID NO: 6;
 - 4) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 8;
 - 5) amino acids 17-258, 18-258, 19-258, 20-258, 21-258, 22-258, 23-258, 24-258, 25-258, 26-258, 27-258, 28-258, 29-258, 30-258, 31-258, 32-258, 33-258, 34-258, 35-258, 36-258, 37-258, 38-258, 39-258, 40-258, 41-258, 42-258, 43-258, 44-258, 45-258, 46-258, 47-258, 48-258, 49-258, 50-258, 51-258, 52-258, 53-258, 54-258, 55-258, 56-258, 57-258, 58-258, 59-258, 60-258, 61-258, 62-258, 63-258, 64-258, 65-258, 66-258, 67-258, 68-258, 69-

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- 6) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 4;
- 7) amino acids 16-238, 17-238, 18-238, 19-238, 20-238, 21-238, 22-238, 23-238, 24-238, 25-238, 26-238, 27-238, 28-238, 29-238, 30-238, 31-238, 32-238, 33-238, 34-238, 35-238, 36-238, 37-238, 38-238, 39-238, 40-238, 41-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 48-238,

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- 8) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-_287, 158-287 or 159-287 of SEQ ID NO: 8; or
- j) a salt or an isoform, fused protein, functional derivative, active fraction or circularly permutated derivative of any of (a) to (i).

- 16. (new) The method according to claim 15, wherein said metabolic-related disease or disorder is selected from the group consisting of:
 - a) obesity;
 - b) impaired glucose tolerance;
 - c) insulin resistance;
 - d) Syndrome X;
 - e) atherosclerosis; and
 - f) Type Π diabetes.
- 17. (new) The method according to claim 15, wherein said polypeptide is glycosylated at one or more sites.
 - 18. (new) The method according to claim 15, wherein said polypeptide is not glycosylated.
- 19. (new) The method according to claim 15, wherein said polypeptide is a fused protein and comprises an immunoglobulin (Ig) fusion.
- 20. (new) The method according to claim 16, wherein said polypeptide is a fused protein and comprises an immunoglobulin (Ig) fusion.
- 21. (new) The method according to claim 17, wherein said polypeptide is a fused protein and comprises an immunoglobulin (Ig) fusion.
- 22. (new) The method according to claim 18, wherein said polypeptide is a fused protein and comprises an immunoglobulin (Ig) fusion.
- 23. (new) The method according to claim 15, wherein said polypeptide is a functional derivative of:
 - a) a polypeptide comprising SEQ ID NO: 2;

- b) a polypeptide comprising amino acids 17 to 258 of SEQ ID NO: 2;
- c) a polypeptide comprising SEQ ID NO: 4;
- d) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 4;
- e) a polypeptide comprising SEQ ID NO: 6;
- f) a polypeptide comprising amino acids 16 to 238 of SEQ ID NO: 6;
- g) a polypeptide comprising SEQ ID NO: 8;
- h) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 8;
- i) a fragment of any of (a) to (h) comprising the C-terminal C1q homology domain; or
- j) a polypeptide fragment comprising:
 - 1) at least 6 consecutive amino acids and not more than 258 consecutive amino acids of SEQ ID NO: 2;
 - 2) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 4;
 - at least 6 consecutive amino acids and not more than 238 consecutive amino acids of SEQ ID NO: 6;
 - 4) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 8;
 - 5) amino acids 17-258, 18-258, 19-258, 20-258, 21-258, 22-258, 23-258, 24-258, 25-258, 26-258, 27-258, 28-258, 29-258, 30-258, 31-258, 32-258, 33-258, 34-258, 35-258, 36-258, 37-258, 38-258, 39-258, 40-258, 41-258, 42-258, 43-258, 44-258, 45-258, 46-258, 47-258, 48-258, 49-258, 50-258, 51-258, 52-258, 53-258, 54-258, 55-258, 56-258, 57-258, 58-258, 59-258, 60-258, 61-258, 62-258, 63-258, 64-258, 65-258, 66-258, 67-258, 68-258, 69-258, 70-258, 71-258, 72-258, 73-258, 74-258, 75-258, 76-258, 77-258, 78-258, 79-258, 80-258, 81-258, 82-258, 83-258, 84-258, 85-258, 86-258, 87-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 97-258, 98-258, 99-258, 100-258, 101-258, 102-258, 103-258, 104-258, 105-258, 106-258, 107-258, 108-258, 110-258, 111-258, 112-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 120-258, 113-258, 114-258, 112-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 115-258, 114-258, 115-258,

- 121-258, 122-258, 123-258, 124-258, 125-258, 126-258, 127-258, 128-258, 129-258 or 130-258 of SEQ ID NO: 2;
- amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-6) 287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 4;
- 7) amino acids 16-238, 17-238, 18-238, 19-238, 20-238, 21-238, 22-238, 23-238, 24-238, 25-238, 26-238, 27-238, 28-238, 29-238, 30-238, 31-238, 32-238, 33-238, 34-238, 35-238, 36-238, 37-238, 38-238, 39-238, 40-238, 41-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 51-238, 52-238, 53-238, 54-238, 55-238, 56-238, 57-238, 58-238, 59-238, 60-238, 61-238, 62-238, 63-238, 64-238, 65-238, 66-238, 67-238, 68-238, 69-238, 70-238, 71-238, 72-238, 73-238, 74-238, 75-238, 76-238, 77-238, 78-238, 79-238, 80-238, 81-238, 82-238, 83-238, 84-238, 85-238, 86-238, 87-238, 88-238, 89-238, 90-238, 91-238, 92-238, 93-238, 94-238, 95-238, 96-238, 97-238, 98-238, 99-238, 100-238, 101-238, 102-238, 103-238,

- 104-238, 105-238, 106-238, 107-238, 108-238, 109-238 or 110-238 of SEQ ID NO: 6; or
- 8) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 8.
- 24. (new) The method according to claim 23, wherein said functional derivative comprises at least one moiety.
 - 25. (new) The method according to claim 24, wherein said moiety is a polyethylene moiety.
- 26. (new) A method of treating a metabolic-related disease or disorder comprising the administration of a composition comprising a polynucleotide and a physiologically acceptable carrier to an individual having said disease or disorder, wherein polynucleotide encodes a polypeptide is selected from:

- a) a polypeptide comprising SEQ ID NO: 2;
- b) a polypeptide comprising amino acids 17 to 258 of SEQ ID NO: 2;
- c) a polypeptide comprising SEQ ID NO: 4;
- d) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 4;
- e) a polypeptide comprising SEQ ID NO: 6;
- f) a polypeptide comprising amino acids 16 to 238 of SEQ ID NO: 6;
- g) a polypeptide comprising SEQ ID NO: 8;
- h) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 8;
- i) a polypeptide fragment comprising:
 - 1) at least 6 consecutive amino acids and not more than 258 consecutive amino acids of SEQ ID NO: 2;
 - 2) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 4;
 - at least 6 consecutive amino acids and not more than 238 consecutive amino acids of SEQ ID NO: 6;
 - 4) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 8;
 - 5) amino acids 17-258, 18-258, 19-258, 20-258, 21-258, 22-258, 23-258, 24-258, 25-258, 26-258, 27-258, 28-258, 29-258, 30-258, 31-258, 32-258, 33-258, 34-258, 35-258, 36-258, 37-258, 38-258, 39-258, 40-258, 41-258, 42-258, 43-258, 44-258, 45-258, 46-258, 47-258, 48-258, 49-258, 50-258, 51-258, 52-258, 53-258, 54-258, 55-258, 56-258, 57-258, 58-258, 59-258, 60-258, 61-258, 62-258, 63-258, 64-258, 65-258, 66-258, 67-258, 68-258, 69-258, 70-258, 71-258, 72-258, 73-258, 74-258, 75-258, 76-258, 77-258, 78-258, 79-258, 80-258, 81-258, 82-258, 83-258, 84-258, 85-258, 86-258, 87-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 97-258, 98-258, 99-258, 100-258, 101-258, 102-258, 103-258, 104-258, 105-258, 106-258, 107-258, 108-258, 119-258, 111-258, 112-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 120-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 125-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 125-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 125-258, 125-258, 125-258, 117-258, 118-258, 119-258, 120-258, 125-258, 125-258, 125-258, 117-258, 118-258, 119-258, 120-258, 125-258, 125-258, 125-258, 125-258, 117-258, 118-258, 119-258, 120-258, 125-258,

- 121-258, 122-258, 123-258, 124-258, 125-258, 126-258, 127-258, 128-258, 129-258 or 130-258 of SEQ ID NO: 2;
- 6) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 4;
- 7) amino acids 16-238, 17-238, 18-238, 19-238, 20-238, 21-238, 22-238, 23-238, 24-238, 25-238, 26-238, 27-238, 28-238, 29-238, 30-238, 31-238, 32-238, 33-238, 34-238, 35-238, 36-238, 37-238, 38-238, 39-238, 40-238, 41-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 51-238, 52-238, 53-238, 54-238, 55-238, 56-238, 57-238, 58-238, 59-238, 60-238, 61-238, 62-238, 63-238, 64-238, 65-238, 66-238, 67-238, 68-238, 69-238, 70-238, 71-238, 72-238, 73-238, 74-238, 75-238, 76-238, 77-238, 78-238, 79-238, 80-238, 81-238, 82-238, 83-238, 84-238, 85-238, 86-238, 87-238, 88-238, 89-238, 90-238, 91-238, 92-238, 93-238, 94-238, 95-238, 96-238, 97-238, 98-238, 99-238, 100-238, 101-238, 102-238, 103-238,

- 104-238, 105-238, 106-238, 107-238, 108-238, 109-238 or 110-238 of SEQ ID NO: 6; or
- 8) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 8; or
- j) a salt or an isoform, fused protein, functional derivative, active fraction or circularly permutated derivative of any of (a) to (i) and wherein the functional derivative comprises at least one moiety attached to one or more functional groups which occur as one or more side chains on the amino acid residues.
- 27. (new) The method according to claim 26, wherein said polynucleotide comprises a portion of a vector.
 - 28. (new) The method according to claim 27, wherein the vector is an expression vector.

- 29. (new) The method according to claim 27, wherein the vector is a gene therapy vector.
- 30. (new) An isolated polypeptide is selected from:
- a) a polypeptide comprising SEQ ID NO: 2;
- b) a polypeptide comprising amino acids 17 to 258 of SEQ ID NO: 2;
- c) a polypeptide comprising SEQ ID NO: 4;
- d) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 4;
- e) a polypeptide comprising SEQ ID NO: 6;
- f) a polypeptide comprising amino acids 16 to 238 of SEQ ID NO: 6;
- g) a polypeptide comprising SEQ ID NO: 8;
- h) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 8;
- i) a polypeptide fragment comprising:
 - 1) at least 6 consecutive amino acids and not more than 258 consecutive amino acids of SEQ ID NO: 2;
 - 2) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 4;
 - at least 6 consecutive amino acids and not more than 238 consecutive amino acids of SEQ ID NO: 6;
 - 4) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 8;
 - 5) amino acids 17-258, 18-258, 19-258, 20-258, 21-258, 22-258, 23-258, 24-258, 25-258, 26-258, 27-258, 28-258, 29-258, 30-258, 31-258, 32-258, 33-258, 34-258, 35-258, 36-258, 37-258, 38-258, 39-258, 40-258, 41-258, 42-258, 43-258, 44-258, 45-258, 46-258, 47-258, 48-258, 49-258, 50-258, 51-258, 52-258, 53-258, 54-258, 55-258, 56-258, 57-258, 58-258, 59-258, 60-258, 61-258, 62-258, 63-258, 64-258, 65-258, 66-258, 67-258, 68-258, 69-258, 70-258, 71-258, 72-258, 73-258, 74-258, 75-258, 76-258, 77-258, 78-258, 79-258, 80-258, 81-258, 82-258, 83-258, 84-258, 85-258, 86-258, 87-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 91-258,

- 258, 97-258, 98-258, 99-258, 100-258, 101-258, 102-258, 103-258, 104-258, 105-258, 106-258, 107-258, 108-258, 109-258, 110-258, 111-258, 112-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-258, 120-258, 121-258, 122-258, 123-258, 124-258, 125-258, 126-258, 127-258, 128-258, 129-258 or 130-258 of SEQ ID NO: 2;
- amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-6) 287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 4;
- 7) amino acids 16-238, 17-238, 18-238, 19-238, 20-238, 21-238, 22-238, 23-238, 24-238, 25-238, 26-238, 27-238, 28-238, 29-238, 30-238, 31-238, 32-238, 33-238, 34-238, 35-238, 36-238, 37-238, 38-238, 39-238, 40-238, 41-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 51-238, 52-238, 53-238, 54-238, 55-238, 56-238, 57-238, 58-238, 59-238, 60-238, 61-238, 62-238, 63-238, 64-238, 65-238, 66-238, 67-238, 68-238, 69-238, 70-238, 71-238, 72-238, 73-238, 74-238, 75-238, 76-238, 77-

- 238, 78-238, 79-238, 80-238, 81-238, 82-238, 83-238, 84-238, 85-238, 86-238, 87-238, 88-238, 89-238, 90-238, 91-238, 92-238, 93-238, 94-238, 95-238, 96-238, 97-238, 98-238, 99-238, 100-238, 101-238, 102-238, 103-238, 104-238, 105-238, 106-238, 107-238, 108-238, 109-238 or 110-238 of SEQ ID NO: 6; or
- 8) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 8; or
- j) a salt or an isoform, fused protein, functional derivative, active fraction or circularly permutated derivative of any of (a) to (i) and wherein the functional derivative comprises at least one moiety attached to one or more functional groups which occur as one or more side chains on the amino acid residues.
- 31. (new) An isolated nucleic acid comprising a polynucleotide encoding a polypeptide selected from:

- a) a polypeptide comprising SEQ ID NO: 2;
- b) a polypeptide comprising amino acids 17 to 258 of SEQ ID NO: 2;
- c) a polypeptide comprising SEQ ID NO: 4;
- d) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 4;
- e) a polypeptide comprising SEQ ID NO: 6;
- f) a polypeptide comprising amino acids 16 to 238 of SEQ ID NO: 6;
- g) a polypeptide comprising SEQ ID NO: 8;
- h) a polypeptide comprising amino acids 22 to 287 of SEQ ID NO: 8;
- i) a polypeptide fragment comprising:
 - 1) at least 6 consecutive amino acids and not more than 258 consecutive amino acids of SEQ ID NO: 2;
 - 2) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 4;
 - at least 6 consecutive amino acids and not more than 238 consecutive amino acids of SEQ ID NO: 6;
 - 4) at least 6 consecutive amino acids and not more than 287 consecutive amino acids of SEQ ID NO: 8;
 - 5) amino acids 17-258, 18-258, 19-258, 20-258, 21-258, 22-258, 23-258, 24-258, 25-258, 26-258, 27-258, 28-258, 29-258, 30-258, 31-258, 32-258, 33-258, 34-258, 35-258, 36-258, 37-258, 38-258, 39-258, 40-258, 41-258, 42-258, 43-258, 44-258, 45-258, 46-258, 47-258, 48-258, 49-258, 50-258, 51-258, 52-258, 53-258, 54-258, 55-258, 56-258, 57-258, 58-258, 59-258, 60-258, 61-258, 62-258, 63-258, 64-258, 65-258, 66-258, 67-258, 68-258, 69-258, 70-258, 71-258, 72-258, 73-258, 74-258, 75-258, 76-258, 77-258, 78-258, 79-258, 80-258, 81-258, 82-258, 83-258, 84-258, 85-258, 86-258, 87-258, 88-258, 89-258, 90-258, 91-258, 92-258, 93-258, 94-258, 95-258, 96-258, 97-258, 98-258, 99-258, 100-258, 101-258, 102-258, 103-258, 104-258, 105-258, 106-258, 107-258, 108-258, 117-258, 118-258, 119-258, 113-258, 114-258, 115-258, 116-258, 117-258, 118-258, 119-

- 258, 120-258, 121-258, 122-258, 123-258, 124-258, 125-258, 126-258, 127-258, 128-258, 129-258 or 130-258 of SEQ ID NO: 2;
- amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-6) 287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 4:
- 7) amino acids 16-238, 17-238, 18-238, 19-238, 20-238, 21-238, 22-238, 23-238, 24-238, 25-238, 26-238, 27-238, 28-238, 29-238, 30-238, 31-238, 32-238, 33-238, 34-238, 35-238, 36-238, 37-238, 38-238, 39-238, 40-238, 41-238, 42-238, 43-238, 44-238, 45-238, 46-238, 47-238, 48-238, 49-238, 50-238, 51-238, 52-238, 53-238, 54-238, 55-238, 56-238, 57-238, 58-238, 59-238, 60-238, 61-238, 62-238, 63-238, 64-238, 65-238, 66-238, 67-238, 68-238, 69-238, 70-238, 71-238, 72-238, 73-238, 74-238, 75-238, 76-238, 77-238, 78-238, 79-238, 80-238, 81-238, 82-238, 83-238, 84-238, 85-238, 86-238, 87-238, 88-238, 89-238, 90-238, 91-238, 92-238, 93-238, 94-238, 95-

- 238, 96-238, 97-238, 98-238, 99-238, 100-238, 101-238, 102-238, 103-238, 104-238, 105-238, 106-238, 107-238, 108-238, 109-238 or 110-238 of SEQ ID NO: 6; or
- 8) amino acids 22-287, 23-287, 24-287, 25-287, 26-287, 27-287, 28-287, 29-287, 30-287, 31-287, 32-287, 33-287, 34-287, 35-287, 36-287, 37-287, 38-287, 39-287, 40-287, 41-287, 42-287, 43-287, 44-287, 45-287, 46-287, 47-287, 48-287, 49-287, 50-287, 51-287, 52-287, 53-287, 54-287, 55-287, 56-287, 57-287, 58-287, 59-287, 60-287, 61-287, 62-287, 63-287, 64-287, 65-287, 66-287, 67-287, 68-287, 69-287, 70-287, 71-287, 72-287, 73-287, 74-287, 75-287, 76-287, 77-287, 78-287, 79-287, 80-287, 81-287, 82-287, 83-287, 84-287, 85-287, 86-287, 87-287, 88-287, 89-287, 90-287, 91-287, 92-287, 93-287, 94-287, 95-287, 96-287, 97-287, 98-287, 99-287, 100-287, 101-287, 102-287, 103-287, 104-287, 105-287, 106-287, 107-287, 108-287, 109-287, 110-287, 111-287, 112-287, 113-287, 114-287, 115-287, 116-287, 117-287, 118-287, 119-287, 120-287, 121-287, 122-287, 123-287, 124-287, 125-287, 126-287, 127-287, 128-287, 129-287, 130-287, 131-287, 132-287, 133-287, 134-287, 135-287, 136-287, 137-287, 138-287, 139-287, 140-287, 141-287, 142-287, 143-287, 144-287, 145-287, 146-287, 147-287, 148-287, 149-287, 150-287, 151-287, 152-287, 153-287, 154-287, 155-287, 156-287, 157-287, 158-287 or 159-287 of SEQ ID NO: 8; or
- j) an isoform or fused protein of any of (a) to (i).
- 32. (new) A vector comprising a nucleic acid according to claim 31.
- 33. (new) A transformed cell comprising a vector according to claim 32.
- 34. (new) A method of making a polypeptide comprising culturing a transformed cell according to claim 33 under conditions that allow for the expression of said polypeptide.